PHASE I ENVIRONMENTAL SITE ASSESSMENT

FRESH WATER PUMPS
ST. PAUL ISLAND, ALASKA

Prepared for

National Oceanic and Atmospheric Administration
7600 Sand Point Way NE
Seattle, Washington 98115

Prepared by

Tetra Tech EM Inc.
6100 219th Street SW, Suite 550
Mountlake Terrace, Washington 98043

August 24, 2004

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EXECUTIVE SUMMARY

Tetra Tech EM Inc. (Tetra Tech) received a statement of work (SOW) dated March 22, 2004, from the National Oceanic and Atmospheric Administration (NOAA) under Contract No. WC133F-04-CQ-0003 to prepare a Phase I Environmental Site Assessment (ESA) at the Fresh Water Pumps site (the property) in St. Paul, Alaska (Section 25, Township 35S, Range 132W). The ESA was conducted in accordance with American Society for Testing and Materials (ASTM) Practice E1527-00, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*.

The results of this investigation represent a review of current conditions based on available information and limited observations. In addition to conducting a site reconnaissance, Tetra Tech performed a detailed review of historic records available from Federal and State databases, and obtained historic records information from the current property owner, NOAA.

The first known use of the property was approximately in 1955, as the Cup and Saucer Lake water pumping facilities. According to historical resources, the two original pump houses located at the property were constructed in 1955. In 1956, new City drinking water wells were developed approximately ¼ mile north of the water pumping facilities. The two original pump houses located on the property were taken out of operation and a third pump house was constructed on the property in 1956 to be used as both a pump house and a water treatment plant for the new City wells. Currently, the property is still in use as a water treatment plant and pump house. Three pump houses and an intermodal shipping container that is used to store piping and pipe fittings exist at the property.

The assessment revealed no evidence of recognized environmental conditions in connection with the property.

SECTION 1
INTRODUCTION

Tetra Tech EM Inc. (Tetra Tech) received a statement of work (SOW) dated March 22, 2004 from the National Oceanic and Atmospheric Administration (NOAA) under Contract No. WC133F-04-CQ-0003 to prepare a Phase I Environmental Site Assessment (ESA) at the Fresh Water Pumps in St. Paul, Alaska (Section 25, Township 35S, Range 132W). The ESA was conducted in accordance with American Society for Testing and Materials (ASTM) Practice E1527-00, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM 2000).

1.1 SCOPE OF WORK

The purpose of the ESA was to identify potential areas of environmental concern associated with the subject property. Resources that Tetra Tech used in conducting the ESA include ASTM Practice E1527-00, public documents, Federal and State database access, visual inspection of the subject and surrounding properties, and interviews with persons knowledgeable about historic activities at the subject property.

This ESA is based on available information pertinent to the subject property and results of a walk-through site inspection. Where potential areas of environmental concern are identified, this report will recommend methods for obtaining confirmatory evidence of these concerns, including additional research, investigation, or collecting soil, sediment, surface water, or groundwater samples.

1.2 PURPOSE

The purpose of this ESA is to identify whether recognized environmental conditions are present on the subject property within the scope of work conducted as found in Section 1.1.

Recognized environmental conditions are defined as the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a historic release, or material threat of release of any hazardous substance or petroleum product into structures on the property or to the ground surface, subsurface soil, groundwater, or surface water of the subject or adjacent properties. The term includes hazardous substances or petroleum products even under

conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

1.3 INVOLVED PARTIES

Tetra Tech was contracted by NOAA, trustee for the subject property, to perform an ESA. Ms. Phyllis Swetzof (City Clerk for the City of St. Paul) and Mr. Mark Rukovishnikoff (City Plumber for the City of St. Paul) were interviewed regarding the environmental condition of the subject property. In addition, Mr. Greg Gervais and Mr. Dave Winandy (NOAA Office of Response and Restoration [ORR]), as well as Mr. Tom Simon (NOAA Office of Environmental Safety and Compliance [OESC]) were consulted regarding historical records for the subject property. The Alaska Department of Environmental Conservation (ADEC) Contaminated Sites Database (CSD) was reviewed with regards to state environmental records for the subject property, as well as other potential contaminated sites on St. Paul Island.

SECTION 2
PROPERTY DESCRIPTION

The following sections describe the subject property and adjacent properties as observed by Tetra Tech personnel during the April 20, 2004 site inspection and upon review of applicable maps and records. Figure 1 depicts the geographical location of the site, and Figure 2 provides detail of the subject property. Photographic documentation of the field inspection is presented in Appendix A.

2.1 LOCATION

St. Paul Island is part of the Pribilof Islands, a small island archipelago located in the Bering Sea approximately 800 miles west-southwest of Anchorage and 300 miles north-northwest of Dutch Harbor, Alaska. The City of St. Paul is situated on a peninsula in the southern portion of the island. The subject property is located approximately 2 miles north of the City of St. Paul, and occupies approximately 1.44 acres of land on the eastern slope of Telegraph Hill. Coordinates for the subject property are latitude 57.1474° north and longitude 177.7376° west.

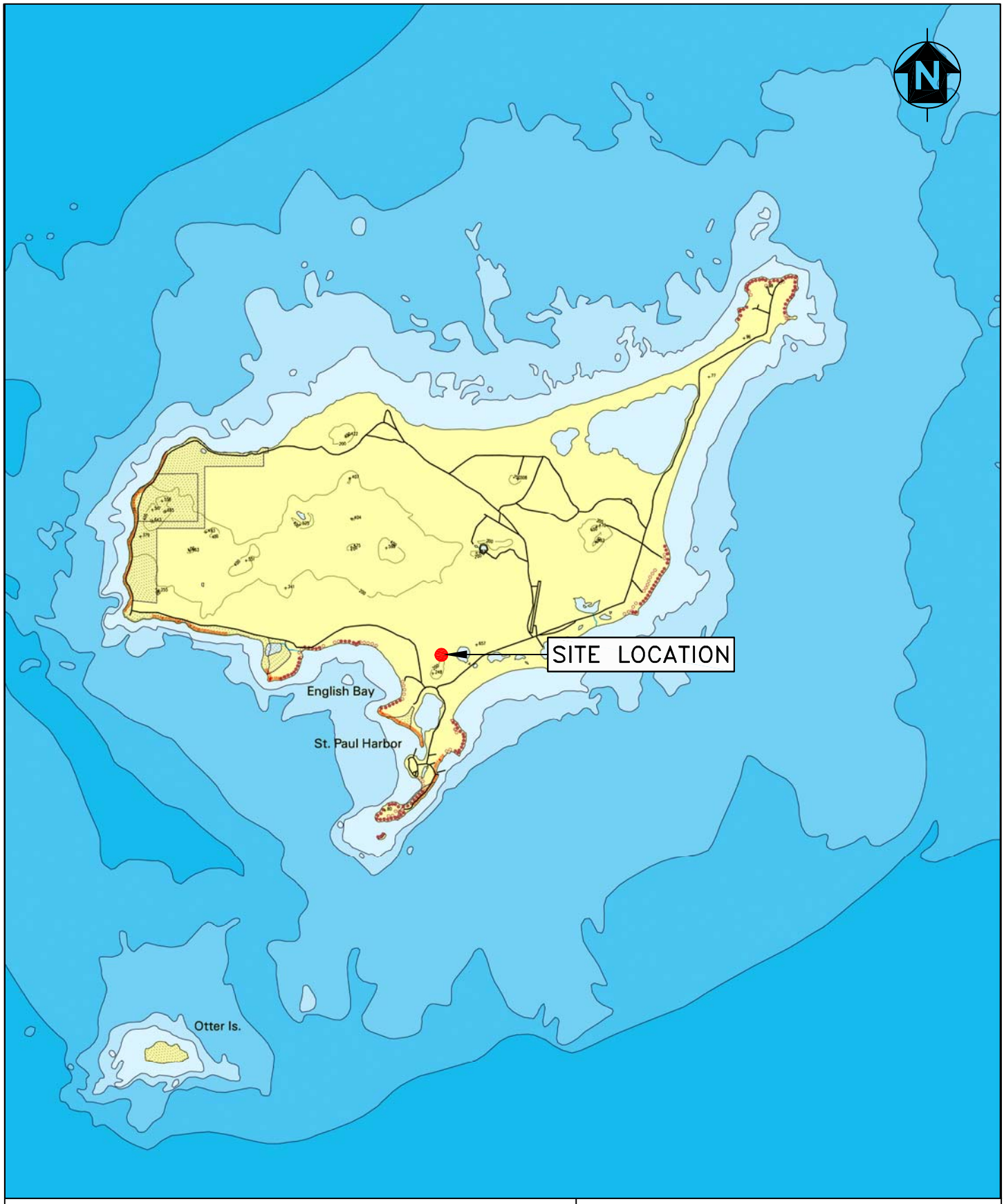
2.2 PHYSICAL SETTING

St. Paul Island covers approximately 44 square miles and was created as the result of volcanic activity. The climate of the island is classified as subpolar, with weather conditions heavily influenced by the Bering Sea. Vegetation on the island is broadly classified as moist tundra. St. Paul Island is also well known for wildlife including fur seals, northern (Steller) sea lions, harbor seals, reindeer, and numerous bird species.

The subject property is located approximately 2 miles north of the City of St. Paul and is zoned as open space. The subject property covers approximately 1.44 acres and includes three small wooden pump houses, one of which is currently in use as a pump house and water treatment plant for City wells located approximately ¼ mile north of the property. An intermodal shipping container located immediately west of the operational pump house was observed during the site reconnaissance. According to Mr. Rukovishnikoff (City Plumber for the City of St. Paul), the contents of the container include pipes and fittings related to the upcoming installation of a new water line. Topographically, the subject property is

situated on the eastern slope of Telegraph Hill; surrounding areas slope downward away from the site to the north, south and east and upward toward the top of Telegraph Hill to the west.

No private or public groundwater wells are located on the subject property. A total of seven groundwater wells are used to supply water for the City of St. Paul; these wells are all located approximately ¼ mile north of the subject property in the vicinity of Telegraph Hill.



1.25 0 1.25 2.5

APPROXIMATE SCALE IN MILES

SOURCE: EPA 1994.

FIGURE 1

SITE LOCATION MAP
FRESHWATER PUMP AREA
ST. PAUL ISLAND, ALASKA

TETRA TECH EM INC.

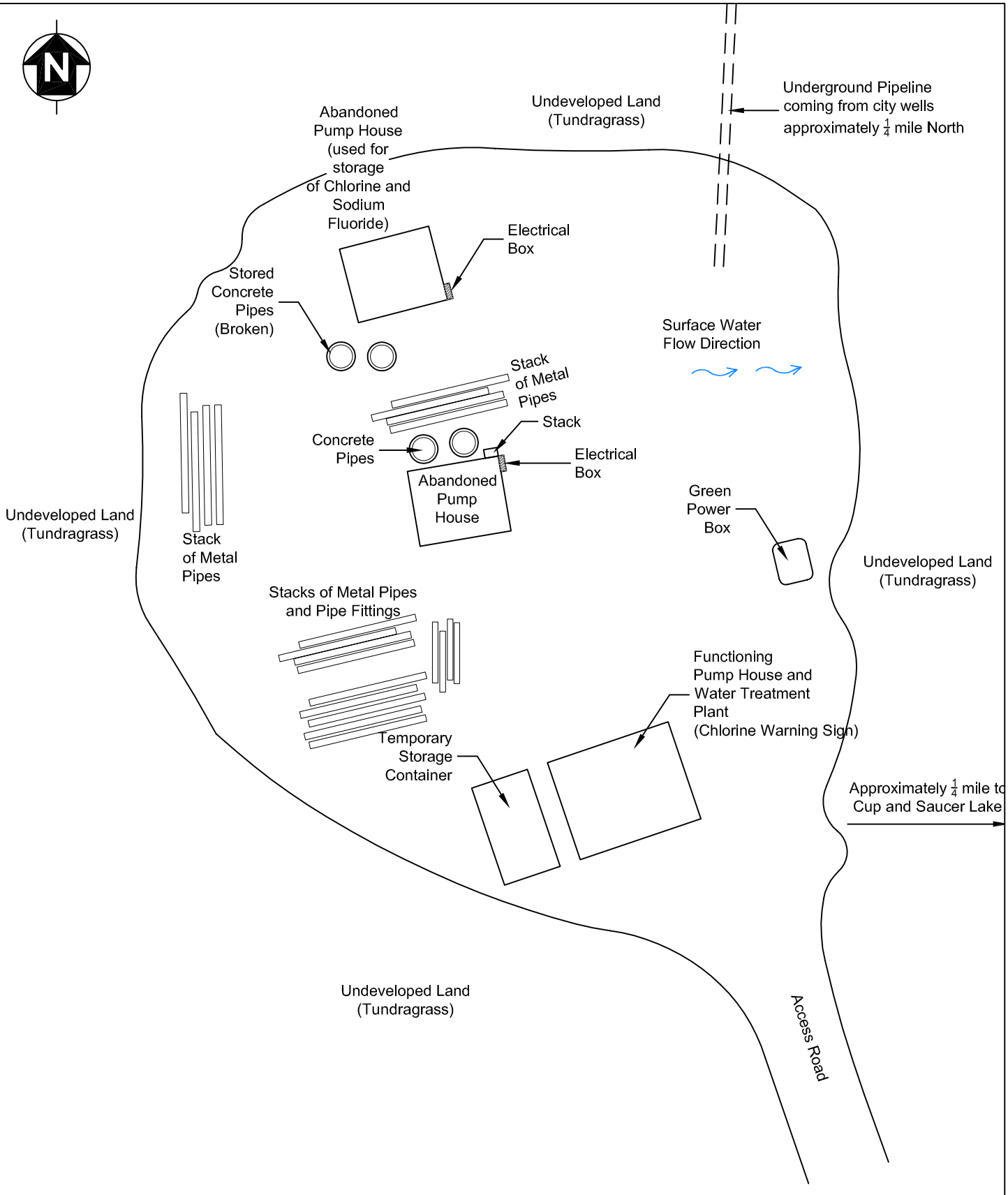


FIGURE 2

SITE PLAN
FRESHWATER PUMP SITE
ST. PAUL ISLAND, ALASKA

NOT TO SCALE

TETRA TECH EM INC.

SECTION 3
HISTORIC REVIEW

During an ESA, several types of records commonly are reviewed to evaluate the subject property's historic uses. Often, sources of valuable historic use data include city directories, Sanborn™ fire insurance maps, and aerial photographs. Because these information sources are often limited and/or nonexistent in rural Alaska, interviews with knowledgeable persons familiar with historic site activities were relied upon to supplement available records pertaining to the subject property.

The following sections summarize city directory listings for the subject property, Sanborn™ fire insurance maps, historical photographs, and other general information obtained during the ESA process.

3.1 CITY DIRECTORIES

No city directories were available for the subject property.

3.2 SANBORN™ FIRE INSURANCE MAPS

No Sanborn™ Fire Insurance Map coverage was available for the subject property.

3.3 HISTORICAL PHOTOGRAPHS

No historical photographs, including aerial photographs, were available for the property.

3.4 GENERAL

The first known use of the property was approximately in 1955, as the Cup and Saucer Lake water pumping facilities. According to Mr. Winandy (NOAA ORR), the two original pump houses located at the property were constructed in 1955. In 1956, new City drinking water wells were developed approximately ¼ mile north of the water pumping facilities. The two original pump houses located on the property were taken out of operation, and a third pump house was constructed on the property in 1956 to be used as both a pump house and a water treatment plant for the new City wells. Currently, the property is still in use as a water treatment plant and pump house. Three pump houses and an intermodal

shipping container that is used to store piping and pipe fittings exist at the property. Personal interviews were conducted with Ms. Swetzof (City Clerk for the City of St. Paul) and Mr. Rukovishnikoff (City Plumber for the City of St. Paul), and to their knowledge, the subject property has been used only for the pumping and treatment of drinking water.

SECTION 4
SITE RECONNAISSANCE

During the ESA process, a site reconnaissance is conducted, and due diligence is exercised in identifying potential areas of environmental concern. The site reconnaissance focuses on evaluating the current disposition of the subject property and adjacent properties, interior storage and waste disposal areas, interior discharges, exterior storage and waste disposal areas, exterior discharges, storage tanks, and polychlorinated biphenyls (PCB).

Tetra Tech personnel performed the field inspection of the subject property on April 20, 2004.

4.1 CURRENT DISPOSITION OF SUBJECT PROPERTY

Purpose and Scope: During an ESA, the subject property is inspected to evaluate the general condition of the buildings and structures. General observations are made about the buildings and structures on the subject property, as well as their location, size, and apparent usage. Construction features, such as ceilings and floors, are noted, as is the presence and type(s) of light fixtures and electrical equipment. Also noted are other features and anomalies that may contribute to environmental contamination. Topography, vegetation, and proximity to thoroughfares and waterways also are observed during the inspection.

Observations: The subject property is occupied by three small pump houses (each measuring approximately 15 feet by 20 feet by 8 feet high). The pump houses are situated on the eastern slope of Telegraph Hill, and are surrounded by tundra grass; water is pumped from the City drinking water wells located approximately ¼ mile north of the property to the currently operational pump house, and is then treated with chlorine and sodium fluoride. The water is then pumped to the City of St. Paul through an underground piping system. An access road leads to the subject property from Polovina Turnpike to the south.

4.2 CURRENT DISPOSITION OF ADJACENT PROPERTIES

Purpose and Scope: During an ESA, properties adjacent to the subject property are inspected for signs or conditions that could pose significant potential for environmental contamination on the subject property

due to lateral migration of surface or subsurface contaminants from those properties. The review of adjacent properties is limited as recommended by ASTM Practice E-1527-00, and information relating to those properties provided herein should not be interpreted as comprehensive or conclusive, unless otherwise noted.

Observations: The subject property is located in an area zoned as open space. All adjacent properties are zoned as open space. The surrounding properties were visually examined from the subject property and public roads. All adjacent properties are undeveloped land covered in tundra grass. Cup and Saucer Lake is located approximately 1/8 mile east of the property and the Coast Guard Station is located approximately ¼ mile east of the subject property. Seven City drinking water wells exist approximately ¼ mile north of the subject property.

4.3 INTERIOR STORAGE AND WASTE DISPOSAL AREAS

Purpose and Scope: During an ESA, interior storage areas are examined for staining or other evidence of former activities that could present a potential for environmental contamination. Containers of chemicals are examined for content and usage, and trash or rubbish accumulation is noted. In addition, designated interior disposal areas and areas conducive to waste disposal are examined for evidence of improper disposal. Finally, restrooms, drains, exterior doors, and secluded closets are visually inspected.

Observations: The interiors of the pump houses were inspected during the site reconnaissance. The currently operational pump house and one of the non-operational pump houses were found to be devoid of any containers of chemicals or containers of unknown use or origin. The other non-operational pump house, located to the north of the other pump houses, is currently being used as a storage room for water treatment chemicals, and was found to contain several 100-pound plastic containers of calcium hypochlorite granules and several 50-pound plastic bags of fluoride powder. The chemicals appear to be properly stored and no leaks or stains were observed in the pump house during the site reconnaissance.

4.4 INTERIOR DISCHARGES

Purpose and Scope: During an ESA, interior discharge areas, such as drainage areas, pipe discharges, sumps, and air emission generators, are visually examined for leakage or other evidence of potential environmental contamination.

Observations: No evidence of discharges was observed inside the three pump houses at the subject property.

4.5 EXTERIOR STORAGE AND WASTE DISPOSAL AREAS

Purpose and Scope: During an ESA, exterior storage and waste disposal areas are visually inspected for signs of releases or other environmental contamination associated with historic activities. Visual and olfactory evidence of chemical or other release are noted at designated storage areas and locations suggestive of storage operations such as concrete or asphalt pads, covered or fenced areas, pits, ponds, and lagoons.

In addition, exterior waste disposal areas are examined, including garbage cans and dumpsters. Areas of stained or off-color soil, stressed vegetation, discarded empty containers, and burned residue are inspected, as are remote or obscured areas of the property conducive to dumping.

Observations: No evidence of exterior storage or waste disposal was observed during the site reconnaissance. Pipes and pipe fittings were the only materials found to be stored externally at the property.

4.6 EXTERIOR DISCHARGES

Purpose and Scope: During an ESA, exterior subsurface structures are inspected for evidence of leaks, releases, or other environmental contamination associated with historic activities. The presence of subsurface structures that collect or contain liquid and sediment may represent a source of potential environmental contamination. Areas that are inspected if present include underground voids and vaults, drains, sumps, oil/water separators, wells, pits, ponds, lagoons, and aboveground structures indicating subsurface activity.

Observations: No evidence of exterior discharges or waste disposal was observed during the site reconnaissance.

4.7 STORAGE TANKS

Purpose and Scope: The presence of current and historic aboveground storage tanks (AST) and underground storage tanks (UST) at the subject property is carefully evaluated during an ESA. Storage tanks are recognized as major potential sources of environmental contamination. Contamination of soil and/or groundwater may occur as a result of spills, overfills, or releases from tank systems. Such contamination would require remediation, and the property owner or operator could be responsible for remediation costs.

Observations: No USTs or ASTs are known to have existed at the subject property.

4.8 POLYCHLORINATED BIPHENYLS

Purpose and Scope: The subject property was inspected for items that potentially may contain PCBs such as transformers and other electrical equipment.

Observations: City officials had no recollection of PCBs ever being used on the subject property. No equipment suspected to contain PCBs was identified at the subject property during the site reconnaissance.

SECTION 5
REGULATORY RECORDS REVIEW

A regulatory records review was conducted through phone interviews with regulatory officials and by consulting available databases provided by the U.S. Environmental Protection Agency and the Alaska Department of Environmental Conservation. According to interviews, the subject property is not part of any regulatory action. Databases that were searched include the following.

Federal Records

- **Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS):** CERCLIS contains data on potentially hazardous waste sites that have been reported to the EPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites that are either proposed to or on the National Priorities List (NPL) and sites that are in the screening and assessment phase for possible inclusion in the NPL.

- **CERCLIS-No Further Remedial Action Planned (CERCLIS-NFRAP):** As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or contamination was not serious enough to require Federal Superfund action or NPL consideration.

- **NPL:** The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the federal Superfund program.

- **Delisted NPL:** The National Oil and Hazardous Substances Pollution and Contingency Plan establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425(e), sites may deleted from the NPL where no further response is appropriate.

- **Corrective Action Report (CORRACTS):** CORRACTS identifies hazardous waste handlers with Resource Conservation and Recovery Act (RCRA) corrective action activity.

- **Resource Conservation and Recovery Information System (RCRIS):** RCRIS includes selective information on sites that generate, transport, store, treat, and/or dispose of hazardous waste as defined by RCRA.

- **Emergency Response Notification System (ERNS):** ERNS records and stores information on reported releases of oil and hazardous substances.

State of Alaska Records

- **Contaminated Sites Database:** The Contaminated Sites Database is the State equivalent to CERCLIS. Sites contained in the CSCSL may or may not already be listed on the Federal CERCLIS list.

The subject property was not listed in any of the above listed databases.

A review was conducted of available Department of Environmental Conservation records for listed sites within 0.25 mile of the subject property and for sites with groundwater contamination located within 1 mile of the subject property. Results of the file review are presented in the table below. Three listed sites (ADEC CSD) were identified within a 1-mile radius of the subject property. However, each of these sites is located either downgradient or sidegradient of the subject property.

Site Name/Address	Site Type	Distance from Subject Property	Comments/Status
TPA 05 St. Paul Landfill Tract 42	Contaminated soil	½ to 1 mile east	The St. Paul Landfill contains municipal solid waste, and a temporary petroleum-contaminated soil (PCS) stockpile currently is located at the site. As of May 2004, the ADEC site file is active.
TPA 13-2 Blubber Dump	Contaminated soil	< ½ mile west	The Blubber Dump site contained a PCS stockpile with as much as 10,000 cubic yards of PCS. In November 2003, the PCS stockpile was relocated to Tract 42 (TPA Site 05, see above). The final closure report for this site is pending.
TPA 15 Scoria Pits at Telegraph Hill	Drums	< ¼ mile southwest	A removal and cleanup action of abandoned drums occurred in the mid 1980s at the Telegraph Hill site. As of April 2004, the ADEC site file is still active; additional groundwater sampling was requested to obtain site closure.

SECTION 6
CONCLUSIONS AND RECOMMENDATIONS

The results of this ESA represent a review of current conditions, based on available information and limited observations, as described in previous sections of this report.

The first known use of the property was approximately in 1955, as the Cup and Saucer Lake water pumping facilities. According to historical resources, the two original pump houses located at the property were constructed in 1955. In 1956, new City drinking water wells were developed approximately ¼ mile north of the water pumping facilities. The two original pump houses located on the property were taken out of operation and a third pump house was constructed on the property in 1956 to be used as both a pump house and a water treatment plant for the new City wells. Currently, the property is still in use as a water treatment plant and pump house. Three pump houses and an intermodal shipping container that is used to store piping and pipe fittings exist at the property.

Conduct of lead-based paint and asbestos surveys is outside the scope of a Phase I ESA. However, due to the time period that the buildings were constructed, lead-based paint and asbestos containing building material may have been used on the buildings at the site. No evidence of the presence of these materials was identified during the site reconnaissance.

Tetra Tech performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527-00 of Section 25, T35S, R132W, Fresh Water Pumps. This assessment has revealed no evidence of recognized environmental conditions in connection with the property.

SECTION 7
LIMITATIONS

This report was compiled based partially on information supplied to Tetra Tech from outside sources and other information in the public domain. The conclusions and recommendations herein are based on the information Tetra Tech obtained in compiling the report. This information is on file at Tetra Tech's office in Mountlake Terrace, Washington. Tetra Tech makes no warranty as to the accuracy of statements made by others, which may be contained in the report, nor are any other warranties or guarantees, expressed or implied, included or intended by the report except that it has been prepared in accordance with the current generally accepted practices and standards consistent with the level of care and skill exercised under similar circumstances by other professional consultants or firms performing the same or similar services.

Because the facts forming the basis for the report are subject to professional interpretation, differing conclusions could be reached. Tetra Tech does not assume responsibility for the discovery and elimination of hazards that could possibly cause accidents, injuries, or damage. Compliance with submitted recommendations or suggestions does not assure elimination of hazards or the fulfillment of client's obligations under Federal, State, or local laws or any modifications or changes to such laws. None of the work performed hereunder shall constitute or be represented as a legal opinion of any kind or nature but shall be a representation of findings of fact from records examined.

The depth of this investigation is confined to the above-listed scope of work. Hazardous materials or coatings may be masked by building materials, buried beneath the ground surface, or concealed in an otherwise undetectable manner. Tetra Tech has exercised due diligence in the conduct of this Phase I ESA but makes no warranty regarding the presence or absence of concealed features that could not be documented at the time the Phase I ESA was conducted.

Prepared by:

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Reviewed by:

Ken Valder, P.E.
Project Manager
Tetra Tech EM Inc.

SECTION 8
REFERENCES

Alaska Department of Environmental Conservation. 2004. Contaminated Sites Database. On-Line Service Accessed on April 20, 2004.

American Society for Testing and Materials (ASTM). 2000. Practice E1527-00, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*.

EPA. 1994. Figure 1: Site Location Map.

Tetra Tech EM Inc.(Tetra Tech) 2004a. Interview regarding historical information about Fresh Water Pumps site, St. Paul Island, Alaska. Between Susan Parks, Environmental Scientist, and Greg Gervais, NOAA ORR. April 16.

Tetra Tech. 2004b. Telephone interview regarding historical information about Fresh Water Pumps site, St. Paul Island, Alaska. Between Susan Parks, Environmental Scientist, and Tom Simon, NOAA OECS. April 12.

Tetra Tech. 2004c. Interview regarding historical information and known recognized environmental conditions about the Fresh Water Pumps site. Between Susan Parks, Environmental Scientist, and Phyllis Swetzof, City Clerk for the City of St. Paul. April 20.

Tetra Tech. 2004d. Telephone interview regarding historical information about the Fresh Water Pumps site. Between Susan Parks, Environmental Scientist, and Dave Winandy, NOAA ORR. May 14.

Tetra Tech. 2004e. Interview regarding historical information and known recognized environmental conditions about the Fresh Water Pumps site. Between Susan Parks, Environmental Scientist, and Mark Rukovishnikoff, City Clerk for the City of St. Paul. April 20.

U.S. Environmental Protection Agency (U.S. EPA). 2004a. Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Database. (http://www.epa.gov/enviro/html/cerclis/cerclis_query.html). On-Line Service Accessed on April 20, 2004.

U.S. EPA. 2004b. CERCLIS-No Further Remedial Action Planned (CERCLIS-NFRAP) Database. (http://cfpub.epa.gov/supercpad/cursites/srchsites.cfm). On-Line Service Accessed on April 20, 2004.

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U.S. EPA. 2004d. National Priorities List Database. (http://www.epa.gov/ superfund/sites/ query/queryhtm/nplprop1.htm). On-Line Service Accessed on April 20, 2004.

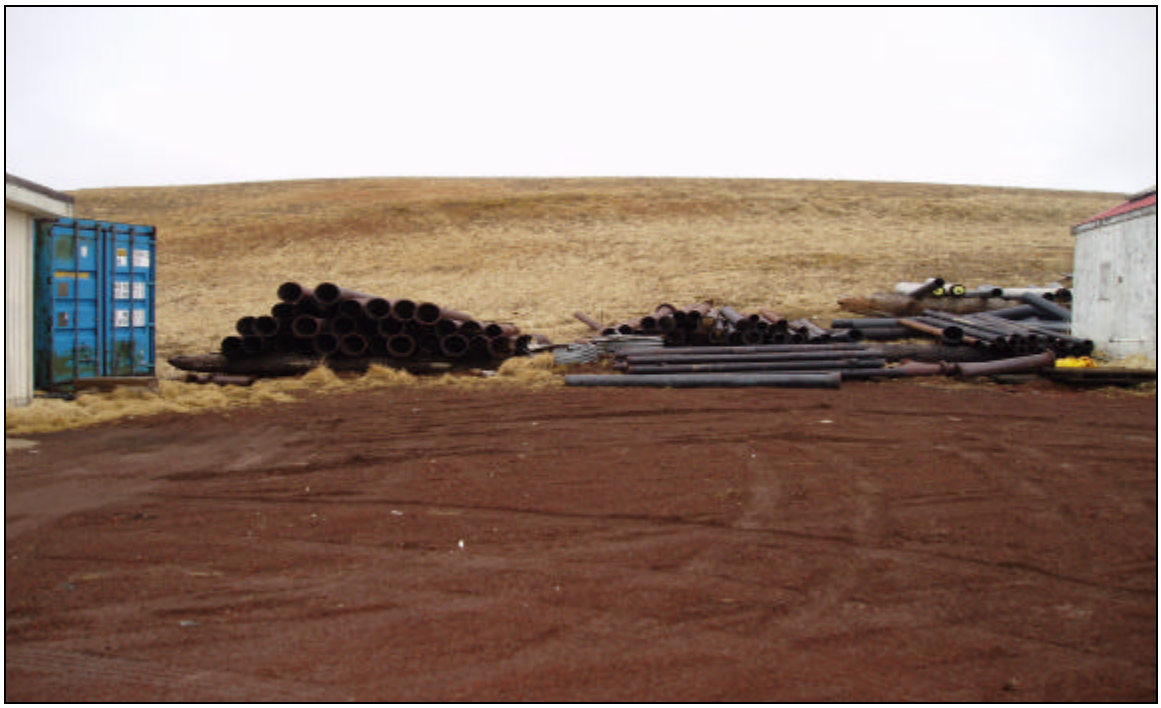
U.S. EPA. 2004e. Resource Conservation and Recovery Information System Database. (http://www.epa.gov/enviro/html/rcris/rcris_query_java.html). On-Line Service Accessed on April 20, 2004.

APPENDIX A

SITE PHOTOGRAPHS

Fresh Water Pumps
St. Paul Island, Alaska

Photograph No. 1 Site: Fresh Water Pumps
Orientation: South Date: April 20, 2004
Description: Looking south at the operational pump house and water treatment facility. The intermodal shipping container located to the right side of the pump house is used for storage of piping and pipe fittings.



Photograph No. 2 Site: Fresh Water Pumps
Orientation: West Date: April 20, 2004
Description: Looking west from the property. Piping and pipe fitting related to the upcoming installation of a new water line are visible in the background.

Photograph No. 3 Site: Fresh Water Pumps
Orientation: Northwest Date: April 20, 2004
Description: Looking northwest at the two non-operational pump houses. The pump house in the right background contains several 100-pound plastic containers of calcium hypochlorite granules and several 50-pound plastic bags of fluoride powder.

Photograph No. 4 Site: Fresh Water Pumps
Orientation: East Date: April 20, 2004
Description: Looking east at the subject property.